



# ► Sustainable Transportation & Land Use Integration Study

## MAG Transit Committee

February 10, 2011



SUSTAINABLE TRANSPORTATION  
& LAND USE INTEGRATION STUDY

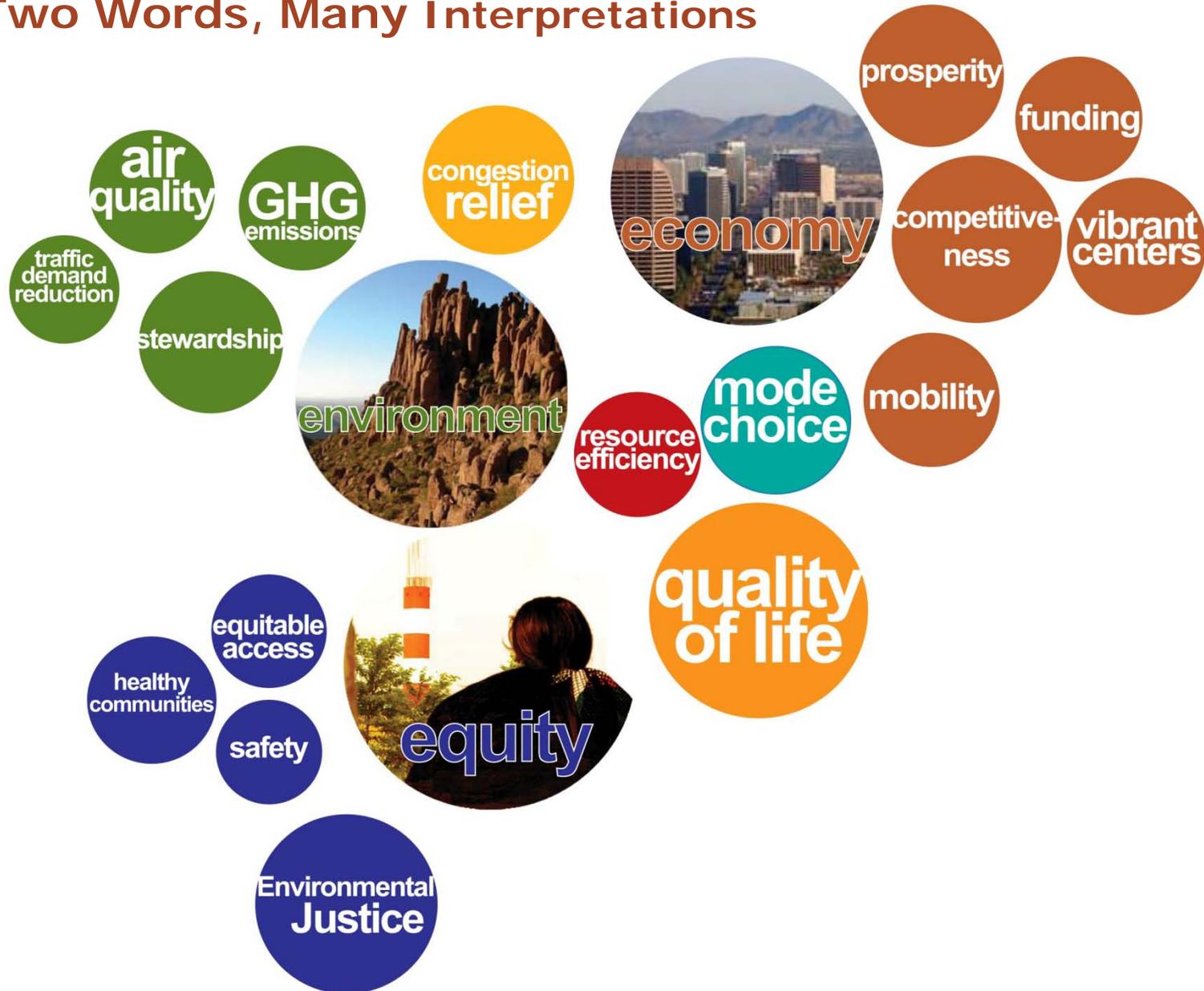


# Study Update

- First Stakeholders Group meeting today at 2:00 pm
  - Study introduction
  - Perspectives on sustainable transportation
  - Regional transportation framework and issues
- Very much a learning process
- Arup North America, Ltd. – Mark Shorett
  - Sustainable Transportation: Two Case Study Examples

# Sustainable Transportation

Two Words, Many Interpretations



# Sustainable Transportation

## Two Words, Many Levels of Implementation



# Regional / State

## Western Australia *(Capital: Perth)*



*State Sustainability Strategy*  
Integrating Land Use and Balanced Transport Policy

### Vision

“Transport and land use decisions are so interconnected and synergistic that a more balanced, less car dependent city rapidly emerges and solves multiple urban sustainability problems.”

### Objectives

- 1. Increase** residential, employment, retail, community and entertainment **activity around key transport nodes and in major centres.**
- 2. Achieve a balance between car use and other transport options** through promotion and provision of efficient and effective public transport and non-motorised personal transport alternatives

### Actions (sample)

*Encourage local government to provide for flexibility in residential zoning, which allows small business and ‘corner shop’ retail facilities to locate in existing suburban communities.*

# ► Case Study: Denver Metro Area

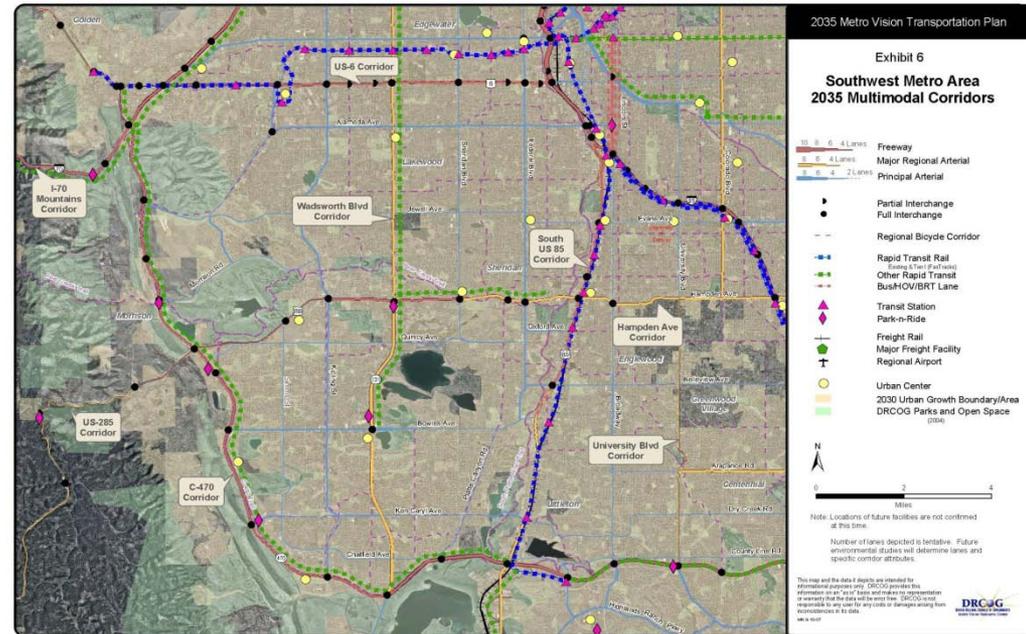
- Multiple agencies supporting a common vision
  - DRCOG
  - RTD-FasTracks
  - Cities
- **1997:** MetroVision 2020
- **2000:** Mile High Compact
- **2007:** MetroVision 2035





# Denver Metro Area: Integrated Corridor Planning

- Vision
- Goals/Objectives
- Environmental Scan
- Land Use Integration
- Capital Projects
  - Transit
  - Pedestrian/Bike
- System Management
- TDM



## ► Denver Metro Area: Mobility

- **1982-2000:** Per capita VMT on freeways and arterials increases 28%
- **2000-2009:** Mobility performance improves



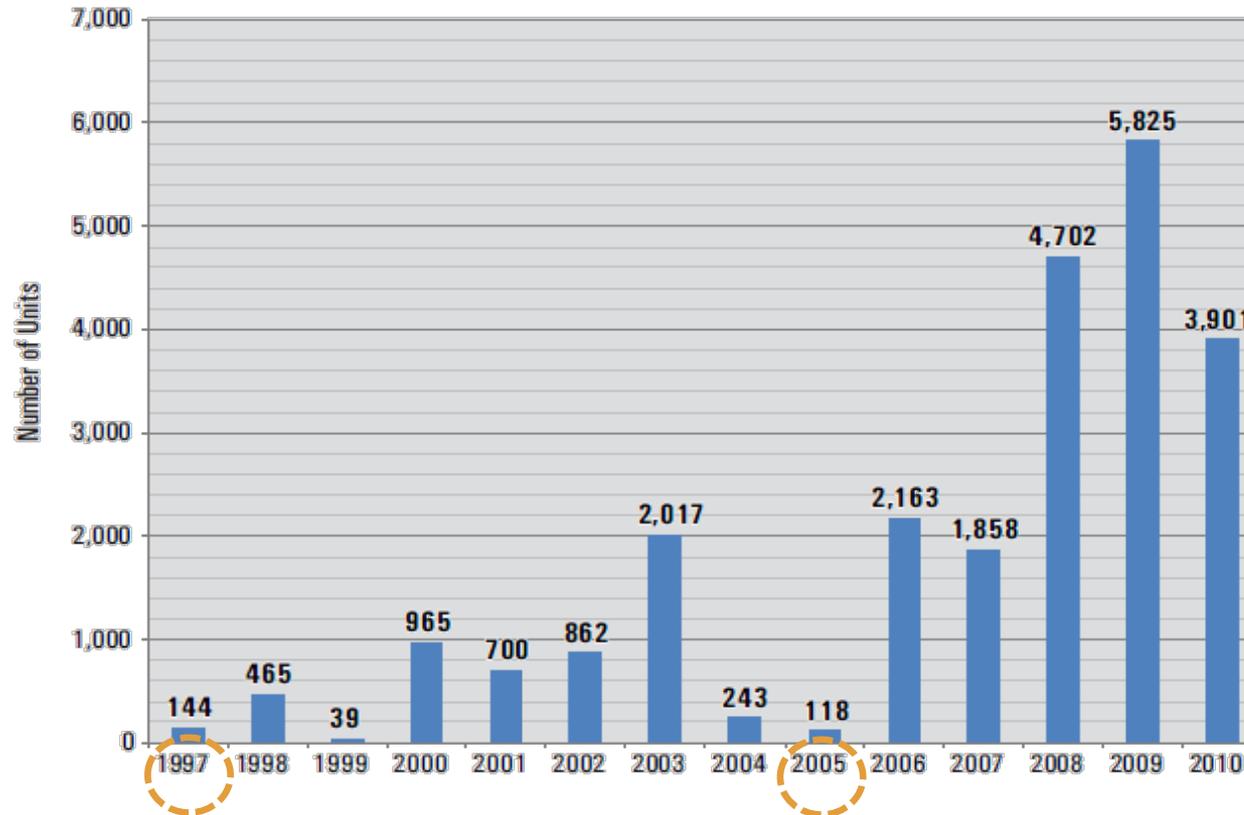
Year	Daily Per Capita VMT (Freeways + Arterials)	% Change Daily Per Capita VMT	Annual Per Capita Transit Trips	% Change Annual Per Capita Transit Trips
2000	19.42	-6%	40.52	+6%
2009	18.28		43.13	

(Texas Transportation Institute 2010 Urban Mobility Report)

# ► Denver Metro Area: TOD

## Residential Development

Exhibit 3-2: Residential TOD by Delivery Year



1997: Metro Vision adopted

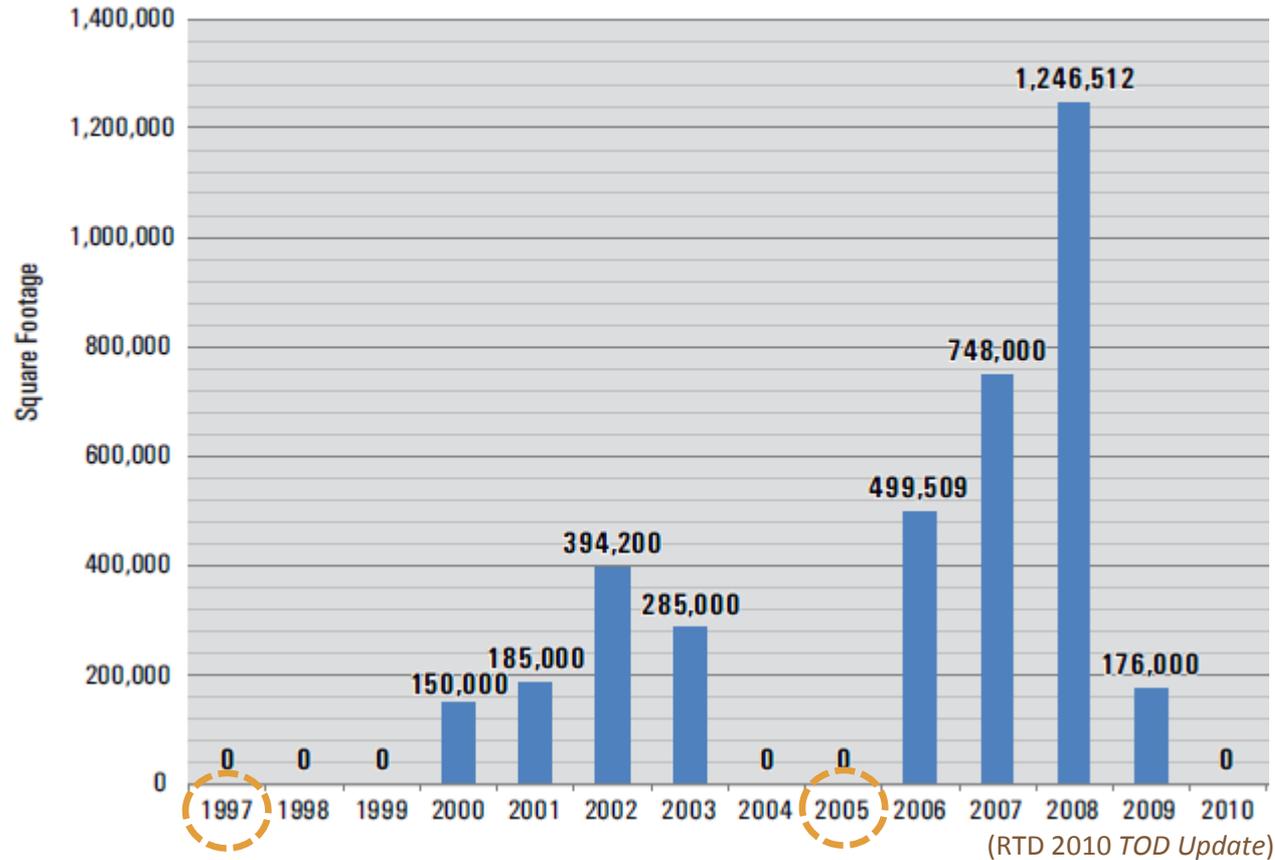
2005: Tax measure approved to fund expansion

(RTD 2010 TOD Update)

# ► Denver Metro Area: TOD

## Office Development

Exhibit 3-3: Office TOD by Delivery Year



1997: Metro Vision adopted

2005: Tax measure approved to fund expansion

## ► Case Study: Perth, Australia

- Highest car ownership among Australian cities
- New rail investments combined with system overhaul
- Coordinated Land Use Planning:
  - Metropolitan Region Scheme
  - Network City Plan
- Consumer-driven approach



# ► Perth, Australia: Investments

- Railways overhauled in 1990s
- System additions combined with changes to strategy and service
- Integrated with regional land uses:
  - Create walk-on patronage TOD areas (eg. Subi Centro) with walkability for car-free trips
  - Have fewer stations for speed over larger distances
  - Accommodation at rail stations for easy bus transfers and multi-modal trips.



## ► Perth, Australia: Transit System Impact

- **Rail ridership** grew from 8 million to 47 million riders per year (1991 to 2006)
- **Subi Centro Station Area:** \$130m AUD state investment spurred \$500m private sector investment



## ► Perth, Australia: TravelSmart

- **Consumer-Driven Approach:** Outreach, information tailored to targeted areas and households
- **Surprising Results:** Individuals express greater interest than expected in sustainable modes
- **Effective:** 20%-30% percent increase in bike/walk travel (from a low base) and a 9%-14% percent decrease in auto travel
- **Economic Impacts:** cost-benefit ratio of 13 to 1 - much higher than what is usually estimated for transport infrastructure investments



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# QUESTIONS?



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